LINKSYS®
A Division of Cisco Systems, Inc.

USER GUIDE

Media Center Extender

Models: **DMA2100, DMA2200**

DMA2100 DMA2200

About This Guide

Icon Descriptions

While reading through the User Guide you may see various icons that call attention to specific items. Below is a description of these icons:

NOTE: This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.

WARNING: This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.

WEB: This globe icon indicates a noteworthy website address or e-mail address.

Online Resources

Website addresses in this document are listed without **http://** in front of the address because most current web browsers do not require it. If you use an older web browser, you may have to add **http://** in front of the web address.

Resource	Website
Linksys	www.linksys.com
Linksys International	www.linksys.com/international
Glossary	www.linksys.com/glossary
Network Security	www.linksys.com/security
Microsoft	www.microsoft.com/media center

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CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
8. Do not defeat the safety purpose of the polarized plug. A polarized plug has two blades with one wider than the other. The wide blade is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
13. The socket-outlet shall be installed near the apparatus and shall be easily accessible.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Important Safety Instructions ii

Chapter 1: Product Overview 1

Front Panel (DMA 2100) 1
Front Panel (DMA 2200) 1
Back Panel (DMA 2100) 2
Back Panel (DMA 2200) 3
Remote Control Overview 4

Chapter 2: Network Setup and Extender Connections 6

Connect to a Wireless or Wired Network 6
Wireless Network. 7
Wireless Security. 8
Wired Network 9
Extender Connections 10
High Definition (HD) Connections 10
Standard Definition (SD) Connections 12
Power on the Media Center Extender 14
Device Configuration 15
Record Setup Key from Device 16
Media Center Configuration. 18

Chapter 3: Using the Media Center Extender 22

Using Your Remote Control 22
Menu Summary 29
Pictures + Videos 29
Music 32
TV + Movies 33
View Your Libraries. 37
Stream Online Content 37
Sports 38
Tasks. 41

Special Features 50

Appendix A: Troubleshooting 51

Appendix B: Specifications 63

Appendix C: License Information 67

Appendix D: Warranty 75

LIMITED WARRANTY 75

Appendix E: Regulatory Information 78

FCC Statement 78

Safety Notices 79

Industry Canada Statement 79

Wireless Disclaimer 80

Declaration of Conformity with Regard to the EU Directive 1999/5/EC and 2004/108/EC(R&TTE and EMC Directive) 82

User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE) 88

Chapter 1: Product Overview

The Linksys DMA 2100 and 2200 Media Center Extenders provide you with the ability to access your Windows Vista™ operating system and control content on your Vista Media Center computer. Your digital video, music and pictures are brought directly to your TV or home theater where you will enjoy an enhanced user experience.

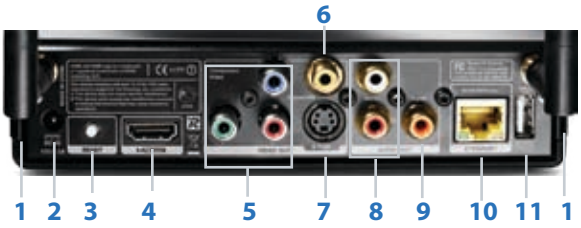
NOTE: There is an IR sensor on the front of the Media Center Extender. Make sure the front panel is visible for the remote control.

Front Panel (DMA 2100)

Front Panel (DMA 2200)

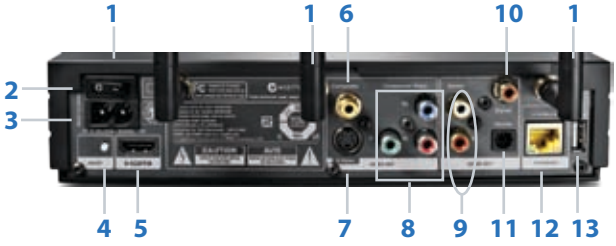
1	CD/DVD Tray	4	Stop button
2	Open/Close tray button	5	Power button
3	Pause, Fast forward button		

Back Panel (DMA 2100)



1	Antenna
2	Power cord connector
3	Reset (Default)
4	HDMI connector
5	Component Video out connectors (Y, Pb, Pr)
6	Composite Video out connector
7	S-Video out connector
8	Stereo RCA Audio out connectors
9	Digital Audio out connector (Coaxial RCA, SPDIF)
10	Ethernet connector
11	For Service Only - do not use

Back Panel (DMA 2200)



1 Antenna

2 Power switch (on/off)

3 Power cord connector

4 Reset (default)

5 HDMI connector

6 Composite Video out connector

7 S-Video out connector

8 Component Video out connectors (Y, Pb, Pr)

9 Stereo RCA Audio out connectors

10 Digital Audio out connector (Coaxial RCA,SPDIF)

11 Digital Audio out connector (Optical SPDIF Toslink)

12 Ethernet connector

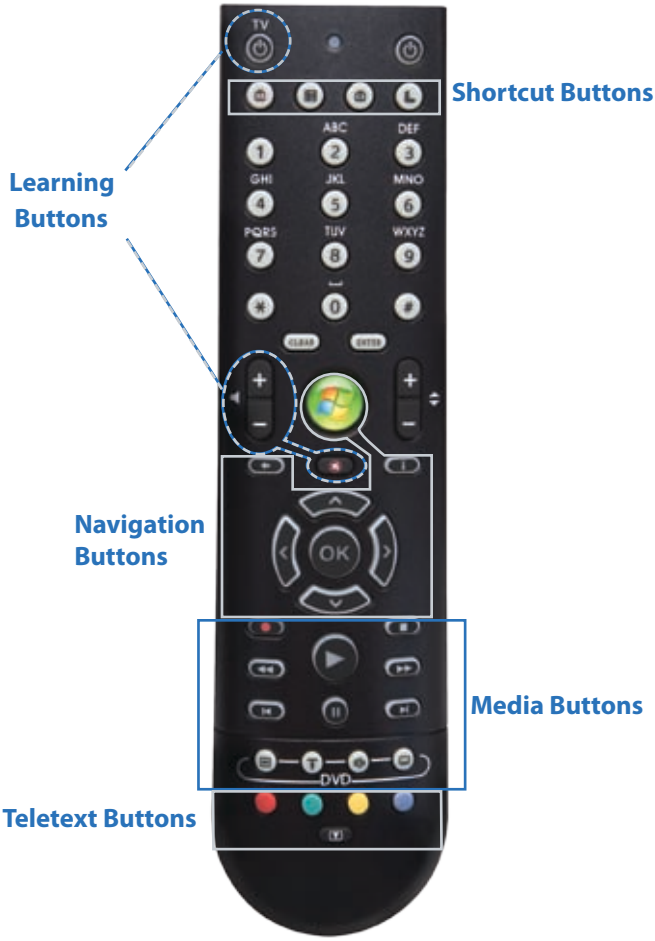
13 For Service Only - do not use

Remote Control Overview

Number	Description
1	TV Power
2	Extender Power
3	Recorded TV
4	Guide
5	Live TV
6	Linksys menu
7	Alphanumeric keypad
8	Clear
9	Enter
10	Volume up/down
11	Media Center button
12	Channel up/down
13	Back
14	Mute
15	More information
16	Up arrow
17	Left arrow

Number	Description
18	OK
19	Right arrow
20	Down arrow
21	Record
22	Stop
23	Rewind
24	Play
25	Fast Forward
26	Skip Backward
27	Pause
28	Skip forward
29	Media menu
30	Media Top menu
31	Audio track from Media
32	Media Subtitles
33-36	Teletext buttons (available in selected regions)
37	Teletext on/off button (available in selected regions)

NOTE: The remote control can learn some TV functions. See *Chapter 3, Using Your Remote Control* for programming details.

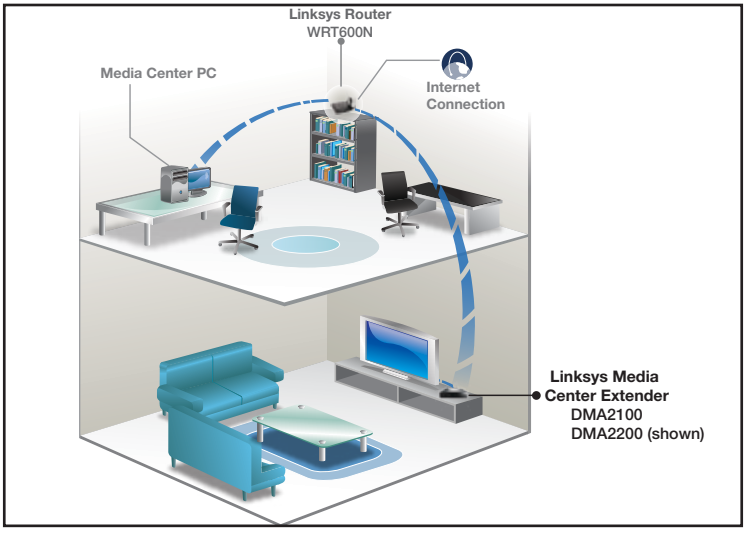


Chapter 2: Network Setup and Extender Connections

If you have already used the Quick Install Guide and have successfully set up your Media Center Extender, you can skip this Chapter which provides more detailed information regarding networks and connections.

Connect to a Wireless or Wired Network

The following diagram shows a home network that is configured correctly, using a wireless connection. The PC is connected to the router using an Ethernet connection and the Extender is connected to this same router using a wireless connection. In this case both can connect to the internet and can communicate to each other.



Home Network

NOTE: It is very important that your Media Center Extender is connected to the same network as the computer containing the files you want to share.

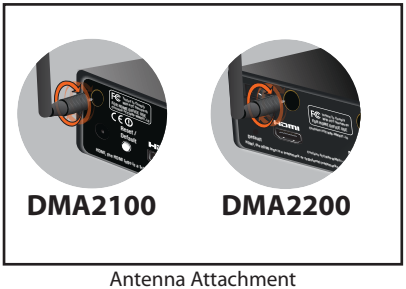
Connecting your Extender to your home network and the Internet will enable you to access Online Services, and will also enable you to share your Vista Media Center computer's audio, video and picture files.

Wireless Network

The maximum performance for wireless is derived from IEEE Standard 802.11 specifications. Actual performance can vary, including lower wireless network capacity, data throughput rate, range and coverage. Performance depends on many factors, conditions and variables, including distance from the access point, volume of network traffic, building materials and construction, operating system used, mix of wireless products used, interference and other adverse conditions.

Attach the Antennas

If connecting wirelessly, you need to attach the antennas. There are two (2) antennas for the DMA2100 and three (3) for the DMA2200. The antennas should be screwed on in a clockwise direction. Hand tighten until they are securely in place. The antennas should be raised when the Extender is in use.



Antenna Attachment

Antennas Raised

Wireless Security

Wireless networks are convenient and easy to install, so homes with high-speed Internet access are adopting them at a rapid pace. Because wireless networking operates by sending information over radio waves, it can be more vulnerable to intruders than a traditional wired network. Like signals from your cellular or cordless phones, signals from your wireless network can also be intercepted. Since you cannot physically prevent someone from connecting to your wireless network, you need to take some additional steps to keep your network secure.

Your entire network must match security levels for each device to work. The security levels available for your Media Center Extender are WEP, WPA/PSK TKIP or WPA2/PSK AES. If your network is unencrypted, you can also choose that, however it is not recommended.

Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA/WPA2) and Wired Equivalency Privacy (WEP) offer different levels of security for wireless communication.

A network encrypted with WPA/WPA2 is more secure than a network encrypted with WEP, because WPA/WPA2 uses dynamic key encryption. To protect the information as it passes over the airwaves, you should enable the highest level of encryption supported by your network equipment.

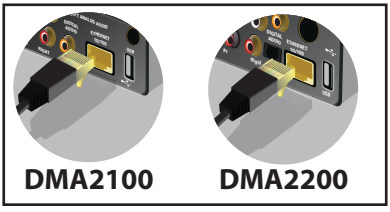
WEP is an older encryption standard and may be the only option available on some older devices that do not support WPA.

You can also purchase a wireless powerline adapter, such as Linksys PLE200 to improve wireless network speed and security.

Wired Network

Wired Connection to your Computer

Connect the Ethernet cable (included) from the back panel of the Media Center Extender to the back panel of your router.



Ethernet Connection

Extender Connections

Connect your Media Center Extender to a TV or A/V receiver with a digital or analog connection.

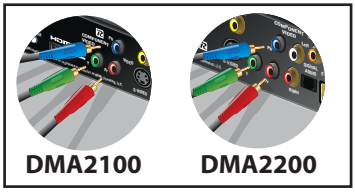
NOTE: Before you perform any of the following connections, power off your TV.

High Definition (HD) Connections

We recommend that you use a high definition connection, if possible. Component video cables are included with the Media Center Extender. If you use component video, you will need to make a separate audio connection. If your TV is capable of receiving an HDMI signal you can connect a HDMI cable (not included) which will supply both audio and video signals.

Component Video

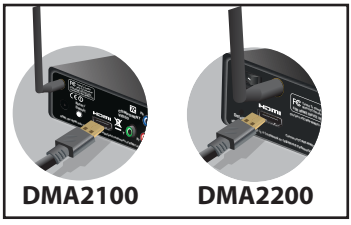
Connect the component video cable (included) from the Media Center Extender's back panel to your TV's available component video connection ports.



Component Video Connections

HDMI (Video and Audio)

Connect a HDMI cable (not included) from the Media Center Extender's back panel to your TV's available HDMI connection port. You can then connect the Media Center Extender to the Media Center Computer. Skip to *Power on Device*.



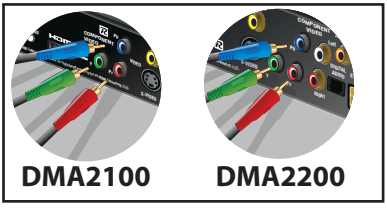
HDMI Connection

Standard Definition (SD) Connections

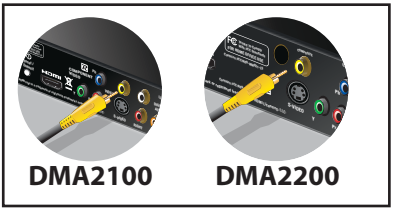
Video

Connect **one** type of standard analog video cable from the Media Center Extender's back panel to your TV's video connection port.

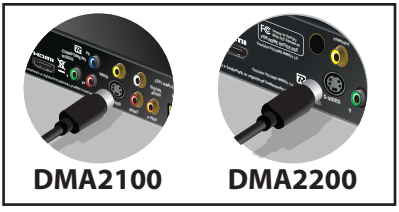
You can connect a component video (red, green, blue) cable (included) composite video cable (included) or a S-Video cable (not included). .



Component Video Connection



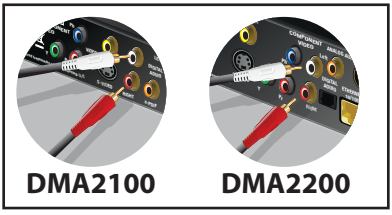
Composite Video Connection



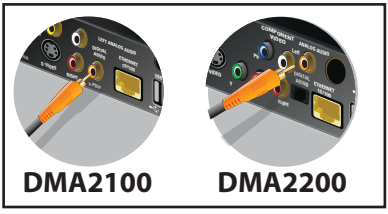
S-Video Connection

Audio

Connect **one** type of audio cable from the Media Center Extender's back panel to your TV or AV receiver's audio connection port. You can connect analog stereo RCA (included) or a digital SPDIF coaxial RCA (not included) or, for the DMA2200, digital SPDIF Optical Toslink (not included).



Analog Stereo RCA Audio Connection



Digital Audio (Coaxial RCA) Connection

DMA2200 only -Digital Audio (Optical Toslink) Connection

Power on the Media Center Extender

NOTE: Power on your TV.

DMA2200

Plug the Media Center Extender's power cord connector to the unit's power port on the back panel. Plug the cord into an electrical outlet.

DMA2200 Power Cord and Switch

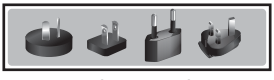
There is also an on/off power switch just above the power port. Power on the unit before starting Device Configuration.

DMA2100

This unit ships with the correct power clip for your region.

DMA2100 Power Cord

Plug the Media Center Extender's power cord connector to the unit's power port on the back panel. Plug the cord into an electrical outlet.



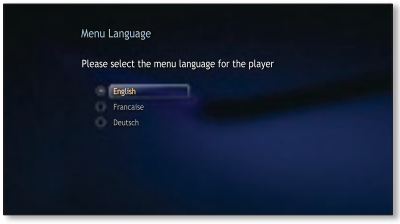
Regional Power adapters

If needed, pull out the clip covering the power port connector. You can then snap in the appropriate power clip that matches your main power outlet. Power clips are used in Europe and Asia.

Device Configuration

Configure Language Settings

Use the arrow keys to highlight the correct language options for your configuration. Press **OK** on the remote control, or select *Next* to continue.



Menu Language

Configure Display Connection

A HDMI connection should automatically be discovered, depending on the TV and settings. For other connections you can choose the video, audio and aspect ratio to optimize the playback quality.

Your choice should match the actual hardware connection that you made. Press **OK** on the remote control or select *Next* to continue.

Connector Type

Configure Network Settings

Select the type of network connection you are using, wired or wireless and press **OK** on the remote control or select *Next* to continue.

If you connect wirelessly, you will be asked to confirm your current network's wireless security level. Using the remote, select **Encryption Key** on-screen and enter the encryption key for your network using the on-screen keyboard and click *Next*.

Press the Media Center button on the remote. The next message on the TV will be "Connecting to PC" when the Extender makes the connection.

NOTE: For wireless router settings, the security level chosen on the Extender setup screens must match your computer security.

Record Setup Key from Device

1. For the computer to recognize the Media Center Extender, it will need a Setup key. The eight digit Setup key will display on the TV screen (and on the Media Center Extender if it is a DMA2200).

Setup Key

2. Write down this Setup Key and bring it to your Media Center computer. You can enter the number here:

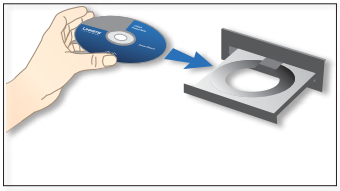
____ ____ ____ ____ - ____ ____ ____ ____

Media Center Configuration

NOTE: Please follow the steps below in order. You must insert the CD-ROM and proceed through the setup screens.

Insert CD-ROM

Insert the CD-ROM that came with your Media Center Extender, into your Media Center computer. Proceed through the steps displayed on-screen.



Inserting the CD-ROM

Windows Vista Update

If you use a compatible version of Windows Vista you will be asked to update your system via Windows Vista Update. Proceed through the steps displayed on-screen.

Setup

If your computer has automatically discovered the Extender, a message will display, stating that the Extender was found.

Found Media Extender

The type of message displayed may vary. Click on the screen, or select **Yes** to start the setup.

If your Extender was not automatically discovered, proceed with the following steps.

1. Open "Media Center" on the computer and press the up or down arrow to select Tasks.

Add Extender

   a. Press the left arrow to select *settings*.

   b. Use the up or down arrow to highlight *Extender* and then press the up arrow to highlight *add extender.* Click *Enter.*

2. You will see a Welcome to Windows Media Center screen. Click Enter or select *Next* to continue.

Set up Extender
Welcome to Windows Media Center
If you have a PC with Windows Vista Home Premium or Ultimate and a home network, you can set up this device as a Media Center Extender.
For more information on Extender before setup, select Learn More.
To proceed with setup now, select Next.
Learn More
Next
Cancel

Welcome Screen

3. You will be asked to enter the Extender Setup key that you noted earlier. After entering the number, click *Enter* or select *Next* to continue.

Extender Setup

4. The next screen may ask about firewalls and changing computer settings, click *Enter* or select *Next* to continue.

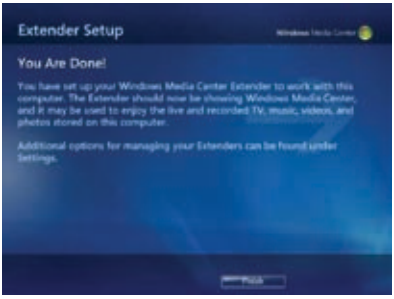
NOTE: Third party firewalls may require additional manual configuration.

5. You will be asked if you want to make media files stored on your PC available. All media files (pictures, music, video) will be shared. You can modify this later in the settings menu. Click Yes and click Enter or select *Next* to continue.

Sharing Files

6. You may also be asked to allow changes to some computer settings, including enabling Away Mode. Away Mode is a power saving mode, that allows your Extender to continue to work even if you power off your computer.

7. The final setup step configures your computer to work with the Extender. When the configuration is complete, the message "You are Done" will display. You can now play music, watch videos or stream online content (subscription may be required) on your television through your Extender. Click *Enter* or select *Finish* to exit the setup.


Extender Setup
You Are Done!
You have set up your Windows Media Center Extender to work with this computer. The Extender should now be showing Windows Media Center, and it may be used to enjoy the live and recorded TV, music, videos, and photos stored on this computer.
Additional options for managing your Extenders can be found under Settings.

You are Done!

NOTE: If you see the error message "Extender did not connect" follow the steps starting with **Insert CD-ROM**.

Chapter 3:
Using the Media Center Extender

Using Your Remote Control

All of the Windows Media Center functions and choices can be made through the Media Center Extender's remote control. Additionally, you can have this remote learn to control volume, mute and the power functions for your television or A/V receiver.

NOTE: There is an IR sensor on the front of the Media Center Extender. Make sure the front panel is visible for the remote control.

Installing Batteries in the Remote Control

If you have not already done so, install the AAA batteries (included) in the remote control. You can use the remote control during the setup process.

Basic Menu Functions

Using the Remote Control

With just the left, right, down, up arrows and OK button, you can control almost all of the Media Center functions.

Press the back arrow below the Media Center button to move back one screen.

Press the Media Center button to return to the main Media Center menu.

Alphanumeric Keypad

In addition to numbers, you can use the keypad to enter letters if text is required.

- Press the number key until the correct letter appears (letters are above numbers 2 through 9).
- Press **CLEAR** to delete a character.
- Press **ENTER** to submit the characters you have typed.

Remote Control Learning

- The TV Power, Volume and Mute, buttons have no default function. These can be programmed to learn the TV functions.

To program the learning feature of the remote control:

1. Place the Extender's remote control head to head (approximately 2"-3" apart) with the TV's remote control.
2. On the Extender's remote control, press the **TV** power button then press and hold the DVD menu button and OK button. When you see the green LED light up, release the buttons. The Extender remote is now in learning mode.
3. Press the button for the feature you want to learn on the Extender's remote control for 5 seconds. The green LED will blink one time, this means the Extender remote can learn this function. If you select a function which can not be learned, the green LED will not blink.

4. After the green light blinks one time, press and hold the corresponding button on the TV's remote control until the green LED of the Extender's remote control blinks twice to confirm the selection. If the remote did not learn the command, the red LED blinks four times quickly and terminates the learning procedure.
5. If you want to learn another key, repeat steps 3 and 4. Press DVD MENU button to end learning mode.
6. If you do not press any button in 5 seconds, the learning setup mode will end automatically.

Learning Remote Buttons	
This is a learning remote. It can learn to program your television and can control the buttons listed below.	
TV	**TV Power** This button can "learn" to turn on the TV.
	Volume Up Increases the current volume by one unit. If the audio is currently muted when this button is pressed, muting is disabled and the volume increases by one unit
	Volume Down Decreases the current volume by one unit. If the audio is currently muted when this button is pressed, muting is disabled and the volume decreases by one unit
	Mute Mutes the TV's audio

Remote Control Buttons

A/V and Power Buttons	
These buttons change channels, adjust volume or to put the Extender in standby mode.	
	Extender Power Puts the Windows Media Center Extender into standby mode if the Extender is running. If the Extender is in standby mode, the Extender wakes from standby mode
TV	**TV Power** By default, the TV button has no command assigned to it. This button can "learn" to turn on the TV.
	Volume Up Increases the current volume by one unit. If the audio is currently muted when this button is pressed, muting is disabled and the volume increases by one unit
	Volume Down Decreases the current volume by one unit. If the audio is currently muted when this button is pressed, muting is disabled and the volume decreases by one unit
	Channel Up Increases the current channel number by one. If Windows Media Center is in a list view when this button is pressed, the focus point moves forward one page in the list.
	Channel Down Decreases the current channel number by one. If Windows Media Center is in a list view when this button is pressed, the focus point moves backward one page in the list
	Mute Mutes the Extender audio

Remote Control Buttons

Navigation Buttons	
These buttons allow you to move among items on the screen in Media Center	
	Start Takes you to the Windows Media Center Start menu
^	**Up Arrow** Moves the menu item up one position
v	**Down arrow** Moves the menu item down one position
<	**Left arrow** Moves the menu item to the left one position
>	**Right Arrow** Moves the menu item to the right one position
	OK Performs the action for the item selected
	Back Moves back one position
i	**More** Provides information for the menu item

Shortcut Buttons	
These buttons provide a quick way for you to access key media experiences in Windows Media Center.	
	Record Live TV Displays the Recorded TV page in Windows Media Center. To view recorded TV, a TV tuner and TV signal are required.
	Guide Displays the Electronic Program Guide from the Vista computer's TV tuner, if available.
	Live TV Shows live TV on the currently selected channel. To view live TV, a TV tuner and TV signal are required.
	Linksys Exits the Media center and returns to the Linksys menu screen.

Remote Control Buttons

Media Buttons	
These buttons are for Media functions. If you press the Media Center Button, you will exit the Media and enter the Windows Media Center Extender menu.	
i	**Info** You can get information on Audio, Subtitle and angle, or jump to a specific time code, Chapter or Title
	Play Starts playing media at the current position. If playback is paused, pressing this button begins playback from the current position.
	Pause Pauses media playback at the current position
	Stop stops playing media at the current position and moves the pointer to the starting point
	Record record the TV show to the computer's disk. If pressed while live TV is on, the current show will be recorded. If pressed while viewing the Electronic Programming Guide, the highlighted show will be recorded. To record TV, a TV tuner and TV signal are required.
	Fast forward speeds up playback to the first fast forward value (3x).
	Skip forward Skips forward one Chapter when this button is pressed
	Rewind Rewinds playback to the first reverse value (3x).
	Skip back Skip back one Chapter when this button is pressed
	DVD Menu Displays the DVD menu

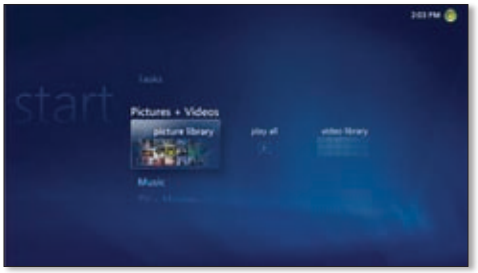
Remote Control Buttons

Teletext Buttons	
These buttons are available for use in some regions. The colored Fastext buttons on the remote control for Media Center Extender work much like the Teletext buttons on a standard Teletext-enabled TV. Additionally, these buttons are used for Integrated Services Digital Broadcasting (ISDB) data functions in addition to Teletext.	
	Teletext On or Off Press the Teletext button. Page 100 will appear in a few seconds and completely replace the TV picture, but it will not affect the TV sound
	Colored buttons The red, green, yellow and blue buttons correspond to the same colored buttons on your TV. Press a colored button on your remote control to go to a preset page.

Menu Summary

The menus are divided into categories, with several functions available for each category.

Pictures + Videos



Pictures + Video

Available functions:

- **more pictures** view online streamed pictures
- **picture library** view stored pictures
- **play all** start a slideshow of all stored pictures
- **video library** view information about stored videos

The Media Center Extender provides the ultimate end-to-end experience when it comes to managing your digital memories, making it easy to view, organize, and share your many memories with friends and family. You can share those memories on the most important screen in your house: your television.

In the past, sharing digital photos was a cumbersome experience that involved crowding around a computer. The Picture Library, found within the Pictures + Videos helps you access all of your digital photos in a better way, from the comfort of your couch. The Picture Library enables easy navigation and highlighting, so you can pick out exactly the photo you want to share.

Finding your favorite photos is easy with the thumbnail views.

- By Folder. Photos are stored in folders, and the Pictures Library enables you to view your photos in that context. Click a folder and you can view the individual images by file name.
- Date Taken. Digital cameras automatically store lots of details about a photo, like the resolution, the shutter speed, and most importantly, the date taken.

Pictures + Video> Pictures folder

Windows Photo Gallery introduces a new way to organize your photos: Tags. Using this new feature you can specify a keyword for individual photos or for a collection of photos. For example, suppose you have a collection of wildlife pictures taken over the years. Those pictures may be stored in a variety of folders on your computer, making it difficult to view all of those wildlife pictures at once. Because you used Windows Photo Gallery to tag them as "Wildlife" pictures, you need only use your remote control to navigate to the Wildlife collection, and you can see all of those pictures, no matter where you stored them.

Photo viewing is even more fun with stylish photo slide shows. With the built-in slide show feature, you can automatically add cool cinematic effects, such as fades, pans, and zooms, to really bring your memories to life.

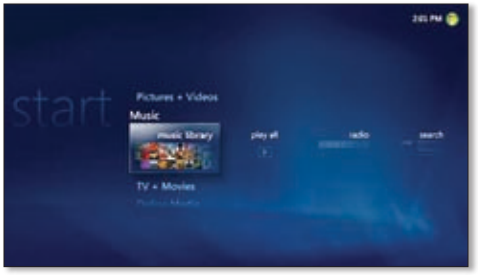
Pictures + Video>Pictures>Slide show Options

Those images will really pop on your high-definition screen, because all of your pictures can now be shown in the highest resolution your TV supports. Finally, if your friends and family really love one of your slide show creations, you can burn it to a video DVD on your computer with your pictures and music.

With the Videos Library, all of your video memories are found in one convenient place. You will notice that a representative shot will be used as the video's thumbnail, making it easier for you to find what you want.

Pictures + Video>Video

Music



Music

Available functions:

- **more music** view online streamed music choices
- **music library** view stored music
- **play all** play stored music (can customize)
- **radio** play online stations that you've subscribed to
- **search** look for available music by artist, song or genre

The Music Library takes full advantage of your widescreen display, displaying the cover art for each album and song you own. The interface looks like a wall of music, with all of your album covers filling the screen. All you have to do is use the remote to pick an album and press Play.

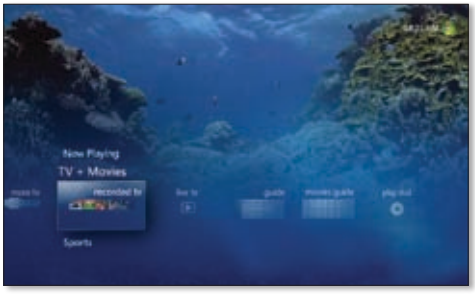
Music>Music Library

There are multiple ways to enjoy your music. Besides the Album view, there is also the Years view. The Years view neatly arranges your music according to the year in which it was released. This makes it easy for you

to see all the music for the year you graduated school or any other year you choose. Browse albums by year to celebrate the sounds of any era.

But you can't talk about music without talking about the radio. Everyone has their favorite station, whether it's terrestrial or via the Internet, you have the ability to tune to those stations in a seamless way. Picking the Radio tile takes you to a view where you can pick and choose between terrestrial, which requires connection to an FM antenna, and Internet radio stations, which requires an Internet connection.

TV + Movies



TV+ Movies

Available functions:

- **more tv** view online streamed show choices
- **recorded tv** view stored shows
- **set up tv** change the way your TV is viewed

No entertainment experience would be complete without television and movies. With the Media Center Extender, TV tuner and TV signal, you have a superb all-in-one entertainment experience with its deep support for your favorite TV shows and the latest movie blockbusters.

You can see what's on, record a future show, or watch programming you've already captured. You can watch a recorded show that you missed while on a trip, or catch the last few minutes of your favorite game, or even download the latest sci-fi film. Enjoy TV and movies in any room.

In many countries, an accurate list of available channels is not accessible. With Windows Vista, the Media Center Extender displays a new scanning

feature for PAL/SECAM countries, which provides a far more accurate way to find channels than in previous versions of Windows.

Because different countries have different broadcast standards and Windows Media Center does not support them all, you will want to make sure Windows Media Center supports your particular standard.

You can digitally watch, pause, and record live TV in many countries around the world. Record TV shows on your computer's hard disk and play them when you like. Want to see that game-winning play again? No problem. With the Windows Media Center instant replay button, you can instantly jump back in seven-second increments. If you want to record a live show, just press the record button on your remote. Windows Media will begin recording the show to your computer's hard disk, and it will stop recording automatically when the show ends. Windows Media Center features multiple tuner support, which means that you can watch a live show on one channel while simultaneously recording a show on a different channel.

Later, when you want to watch a recorded show, Windows Media Center makes it fun and easy for you to find that clip. Rather than showing you just the text names and program information for your recorded show, Windows Media Center will clip a picture from the actual show and use that as the show's selectable thumbnail icon.

TV+ Movies > Preview

High-definition cable support (U.S. only). In the U.S., HDTVs have recently begun to outsell traditional analog TV sets. People are hungry for HD content because every show, from sporting events to the latest movie releases, looks more vibrant and lifelike in high definition. Windows Vista Home Premium and Windows Vista Ultimate are compatible with digital

cable service, which includes support for premium high-definition content.

Keep and share more of your entertainment. Because Windows Vista Home Premium digitally records your live TV shows and movies on your computer's hard disk, you may worry about eventually running out of disk space. Windows Media Center has you covered. With it, you can choose to record shows to another hard disk partition on the same computer, or you can choose to record directly to an external hard disk.

View movies as thumbnails to quickly find what you're looking for. Create a play list and see videos in sequence.

TV + Movies, Play list

Windows Media Center also includes everything you need to burn your favorite shows to video DVD. You no longer need third-party tools to create a DVD that can be played back in a normal DVD player. Just select the show you want to burn, add any additional content—like home videos, music, or photos—and Windows Vista takes care of the rest. Windows Media Center will even create a simple DVD menu, which you can navigate using your DVD remote, so you can easily pick and choose what you want to watch.

Your shows on your time. Plan your TV watching with the Electronic Programming Guide. With Windows Vista Home Premium you can watch TV shows and movies on your terms with the Electronic Programming Guide (EPG) in Windows Media Center. The EPG, which is available in select countries, is a free service that provides date and time listings as well as summaries for all the TV shows and movies available via your local TV service. It covers up to a two-week period, and with it, you can easily browse and record current and future programs according to their start time. The guide also features robust search capabilities that help

you quickly find shows using common categories such as Kids, Movies, or Sports.

TV + Movies, Guide

Sort by category to find the programming you want. Suppose you want to record a show while on vacation. Just find the show in the EPG by navigating to its day and time or by searching for it under the categories view, press the one-touch Record button, and Windows Media Center takes care of the rest. Windows Media Center even gives you the option to automatically record an entire season of a show, while omitting reruns, so you won't miss a single new episode of your favorite show ever again.

Electronic Program Guide (EPG) is supported in the following countries:

Austria	Germany	Netherlands	Sweden
Belgium	India	Norway	Switzerland
Canada	Ireland	Poland	Taiwan
Czech Republic	Israel	Portugal	Turkey
Denmark	Italy	Russia	United Kingdom
Finland	Japan	South Korea	United States
France	Mexico	Spain	

View Your Libraries

A library is content that is stored on your computer and is available for viewing. When you set up the Media Center, you were asked to allow all content. If you have not changed this in the Tasks > settings menu, the folders and files are available for viewing on your TV.

You may access the following libraries by choosing one of the following while in the Media Center :

- **Pictures + Video** > picture library
- **Pictures + Video** > play all (plays a slideshow of content)
- **Pictures + Video** > video library
- **Music** > music library
- **Music** > play all (can select order music plays in)
- **Music** > radio (available if you have subscribed to online radio)
- **Music** > search (find music by artist, song, composer, genre)
- **Online Media** > program library

After selecting a library, you will be able to see what is "Now Playing + Queue".

Stream Online Content

You can stream online content by choosing one of the following while in the Media Center :

- **Pictures + Videos > more pictures**
- **Music > more music**
- **TV + Movies > more tv**
- **Sports > more sports**
- **Online Media > what's new**
- **Online Media > explore (showcase)**

When you choose one of the above, you can also go to the other categories by using the up and then left or right arrows. As you scroll

through the choices, a short description of the currently highlighted choice appears on screen.

When you press OK you will see what is required to download the content. Some services require registration, some require purchase and some will immediately download.

Sports

The Media Center Extender takes your sports television viewing experience to a whole new interactive level. You can watch current programs, plan for future viewing, or see detailed information on players and games.

- **more sports** view online streamed sports programs
- **on now** view sports programs currently playing
- **on later** view a guide of upcoming sports programs
- **scores** view scores and details of major league sports
- **players** add players to track fantasy and favorite players

Sports>On Now

The displayed scores are shown for all the additional games on other channels that are available with your current antenna, cable, or satellite TV service, making it easier to track the action of all the other games that are on.

Sports>Scores

Sports>Scores>Details

With On Later you no longer need to search the entire program guide to find out when the games you care about most are coming on. On Later finds all the games airing over a two-week period that are available from your television service and neatly arranges them according to date and sport.

on later
today
10:00 AM St. Louis Rams at Seattle Seahawks FOX 13
10:00 AM Chicago Bears at Minnesota Vikings KIRO 7
10:00 AM Miami Dolphins at San Diego Chargers GAME 7 492
1:00 PM New York Giants at New England Patriots KOMO 4
1:00 PM Dallas Cowboys at Oakland Raiders TNT 54
1:00 PM Detroit Lions at Arizona Cardinals ESPN 32
1:00 PM Denver Broncos at Houston Texans GAME 10 491
St. Louis Rams (3-3)
Seattle Seahawks (5-3)

Sports>On Later

You can see the schedules for all of the games on over the next two weeks, organized by sport, in one easy place. And you can record a future game at the press of a button on your remote while viewing the upcoming schedule. Just find the upcoming game you want to watch, press the record button, and Windows Media Center adds it to your scheduled recordings.

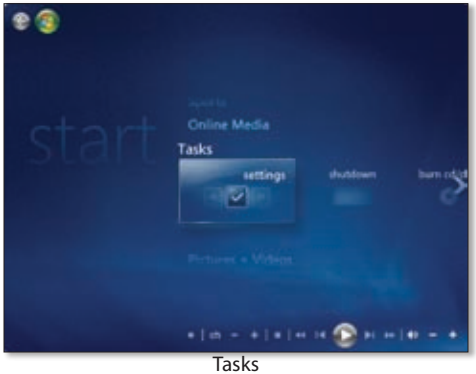
With the Players feature, you can set up Windows Media Center to track your favorite professional athlete. Players displays stats over the course of the season or the stats for a current or recently played game.

players
MLB
N Garciaparra .275 45 23 5 9 54 11
T Graffanino .250 39 34 1 14 32 3
S Hatteberg .312 53 12 1 12 14 3
J Hernandez .280 23 9 0 19 47 0
O Palmeiro .305 19 15 1 9 39 0
I Suzuki .325 23 29 7 1 28 19
Nomar Garciaparra
Los Angeles Dodgers

Sports > Players

For sports fans, fantasy sports leagues are a really fun way to get into the game.

Tasks



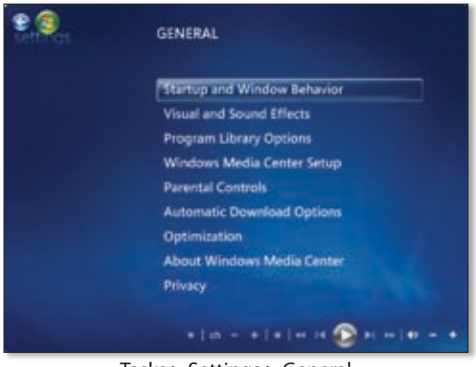
Tasks

- **settings** view or change Media Center Extender settings
- **shutdown** ends the Media Center Extender session
- **tune network** test and improve your Media Center Extender and computer connection

Settings

In the settings menu, you can customize the TV settings using the up, down, left and right arrows and the OK buttons. To move back a screen, press the left arrow button that is under the volume button. Press the Windows Media Center button to return to the main menu.

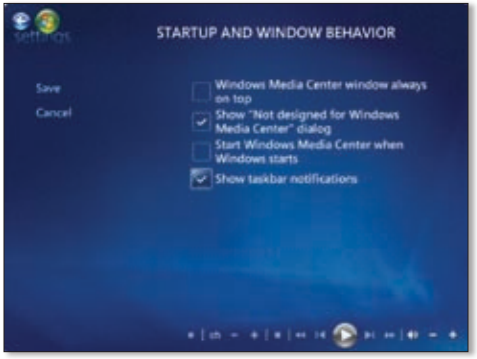
General



Tasks > Settings > General

Startup and Windows Behavior

You can customize the Startup menu and Windows behavior through these settings.


STARTUP AND WINDOW BEHAVIOR
Save
Cancel
Windows Media Center window always on top
Show "Not designed for Windows Media Center" dialog
Start Windows Media Center when Windows starts
Show taskbar notifications

Tasks>Settings>General>Startup and Windows Behavior

Visual and Sound Effects

You can enable transition animations, which also allow you to play sounds when navigating the Windows Media Center. You can also change the video background color.

Tasks>Settings>General>Visual and Sound Effects

Program Library Options

You can allow the applications in the Program Library to:

- Control the media expereince in the Windows Media Center

- Access media information from the Windows Media Center
- Hide Internet Security Warnings

You also have the option of editing the program library content if you select Edit Program Library. Select or clear a check box by pressing OK to enable or disable games and some add-in settings.

PROGRAM LIBRARY OPTIONS
Save
Cancel
Allow applications in Program Library to:
Control the media experience in Windows Media Center
Access media information from Windows Media Center
Hide Internet Security Warnings
Edit Program Library

Tasks>Settings>General>Program Library Options

Windows Media Center Setup

You can use this option to setup your wired or wireless internet connection.

WINDOWS MEDIA CENTER SETUP
Set Up Internet Connection
Set Up TV Signal
Set Up Your Speakers
Configure Your TV or Monitor
Run Setup Again

Tasks>Settings>General>Windows Media Center Setup

Parental Controls

You can enter a four (4) digit access code to block selected programs from being viewed. To view a blocked program, you will need to enter the access code. If you choose to block unrated programs, you may be blocking news and weather information, that is typically unrated.

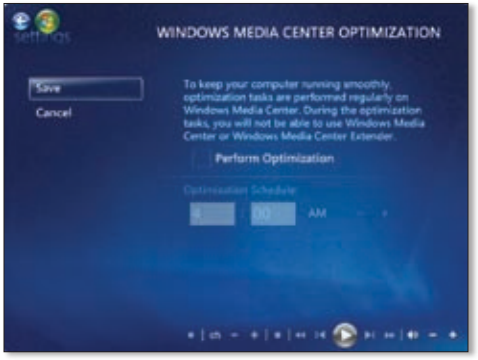
You can choose a minimum level of TV ratings and Movie Ratings to allow. The default settings are to allow all programs.

You can also change your Access Code and Reset Parental Controls.

Tasks>Settings>General>Parental Controls, Enter Access Code

Optimization

To keep the Windows Media Center computer running smoothly, optimization tasks are performed on a regular basis. During optimization you will not be able to use Windows Media Center or the Media Center Extender. You can use this option to set a time that will be convenient each day for the optimization process.


WINDOWS MEDIA CENTER OPTIMIZATION
Save
Cancel
To keep your computer running smoothly, optimization tasks are performed regularly on Windows Media Center. During the optimization tasks, you will not be able to use Windows Media Center or Windows Media Center Extender.
Perform Optimization
Optimization Schedule:
AM

Tasks>Settings>General>Optimization

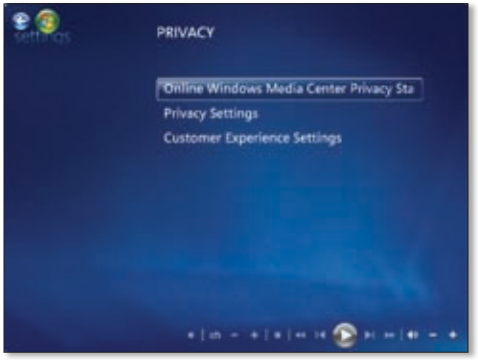
About Windows Media Center

You can find your Software Version, Guide Terms of Service and Data Provider Credits here.

Tasks>Settings>General>About Windows Media Center

Privacy

You can find the Online Windows Media Center Privacy Statement, change Privacy Settings and Customer Experience Settings. Privacy Settings allow you to use the Guide and send anonymous information to Microsoft to improve the quality and accuracy of the service. You can also turn on or off the Most Viewed filter in the Guide. The Customer Experience Settings allow you to send anonymous usage and reliability information to Microsoft.



Tasks>Settings>General>Privacy

TV

Audio

You can choose to enable Stereo or SAP for Windows Media Center content.

Closed Captioning

You can choose to enable Caption Display or Closed Captioning 1 (CC1) or Closed Captioning 2 (CC2).

Pictures

You can customize how the pictures in slide shows are displayed. You can choose:

Show Pictures in random order, Show pictures in subfolders, Show caption - if the picture has a caption it can be displayed

Show song information during slide show

At the beginning and end of a song, Always or Never.

Transition time: choose from 2 through 50 seconds for the slide transition time.

Slide show background color: choose Black, 50% Gray or White.

Extender

Extender Setup
Windows Media Center
Windows Media Center Extender Setup
To set up your computer to work with a Windows Media Center Extender on your home network, you will need to do the following:
• Connect an Extender to this computer
• Configure your computer settings
• If needed, test the performance of your network
Select Next to get started.
Next
Cancel

Tasks>Settings>General>Extender >Extender Setup

You can use this option to setup an Extender or tune your network for optimum performance with the Windows Media Center computer. This setting also shows the Linksys Media Extender name and status.

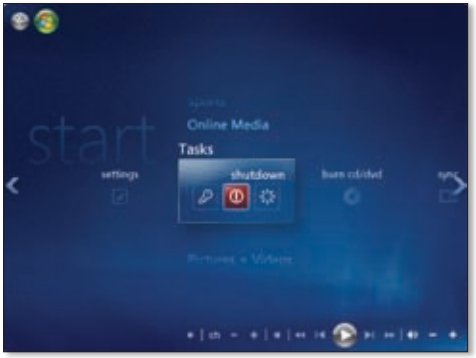
If you select Options, you can display the Network Issues alert whenever low network bandwidth begins affecting television quality.

Library Setup

Tasks>Settings>General>Library Setup

You can add folders to watch or select folders to stop watching, from your pictures, music or video library folders.

shutdown



Tasks>shutdown

You can use this option to end your Media Center Extender session.

tune network

After your Media Center Extender is set up, it is a good idea to use the Network Performance Tuner to analyze your network, and to review the results and suggestions it generates for improving network performance.

Getting started

To use the Network Performance Tuner, ensure your Media Center Extender has been successfully partnered to your Computer running Windows Media Center. Then:

1. On the Media Center Extender, make sure the Windows Media Center Start menu is visible.
2. Select Task -> Tune Network.

To accurately measure your network performance, make sure no media playback occurs on the Media Center Extender while the Network Performance Tuner is in use. For best results, turn off your Media Center Extender and restart it before running the Network Performance Tuner so that all Media Center Extender resources are cleared.

The Network Performance Monitor

The Network Performance Tuner uses the Network Performance Monitor to measure available network bandwidth between your Computer and a Media Center Extender. Running the Network Performance Monitor displays your network bandwidth in real time, so you can see the effects of moving the position of your router or its antennas as you make changes.

Testing your network with the automatic test

A brief automatic test can be run from within the Network Performance Tuner. This automatic test measures the available network bandwidth between your Computer and your Media Center Extender for a short period of time. This test checks whether video transmitted over your home network will have quality problems that would be noticeable when watching live or recorded TV through your Media Center Extender. When the test is complete, it indicates if any potential problems exist or if network performance is acceptable for streaming TV use.

Note: Successful testing does not guarantee against future performance problems. The test runs only for a short time, and non-dual-band wireless networks are susceptible to occasional interference from a variety of sources, including 2.4-GHz cordless phones, microwave ovens, nearby wireless networks, and other potential influences

Special Features

DVD Features (DMA2200 Only)

If your are in the Media Center Extender menu and you insert an audio CD or a DVD, the disc will automatically start playing, except if you are in the Settings mode. The disc will play when you exit Settings.

If the extender menu is not active, press Play on the remote control to start disc playback.

While the DVD is playing, press Press "i" on the remote and you will be able to jump to a specific time or chapter. You can also jump to the title, change the audio, subtitle or angle.

NOTE: The DVD player cannot play HD DVD's, MP3 discs or videos from CD's.

Standby Mode

If you press the Standby button on the remote control or the front panel of the DMA2200, the Media Center Extender will go into a Sleep mode and all ongoing functions are exited. If you press Standby again within some minutes, the Media Center Extender will start up again within a few seconds. If the unit is kept in this Sleep mode for more than some minutes, it automatically enters the low power Standby mode which saves power, but results in longer startup time.

Reset button

There is a reset button on the back panel. A short press of the button will power off the Media Center Extender and then power it back on. Pressing the reset button for five (5) seconds will cause the Media Center Extender to enter a service mode. You can then choose to go back the factory default settings, however, all custom settings will be lost.

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Appendix A: Troubleshooting

Extender Troubleshooting

Initial setup:

Problem: No video. Suggested actions:

1. Check that cables are correctly linked (composite to composite, component to component, etc.) and firmly in place (refer to QI or UG graphics of plugs and connections).
2. Check that TV is set to correct input (if TV supports this).
3. Make sure that either HDMI or one type of video analog (component, composite, etc.) are connected at a time.
4. Reboot the Media Center Extender by powering off and then back on.
5. Connect the unit with composite cables (as this should always have a picture), and then make sure the unit's video setting is set to the correct output wanted.

Problem: No audio. Suggested actions:

1. Check that cables are correctly linked (stereo to stereo) and firmly in place (refer to QI or UG graphics of plugs and connections).
2. If plugged into a receiver, make sure receiver is on and set to the proper input.
3. Make sure the volume on your TV is turned up to an audible level.
4. Make sure the right Audio option was selected in the setup screens.

Problem: Wired networking not working. Suggested actions:

1. Check that the cables are connected to the correct ports and firmly in place and the link light is lit on the Media Center Extender.
2. Check that you have set the device to use a wired connection (refer to QI or UG).
3. Check that router is powered on and if recently turned on, has had time to completely start up.

4. If DHCP is used on the network, make sure that DHCP was selected in the Media Center Extender setup screens or that the correct static IP setting has been configured.

Problem: Wireless networking is not working. Suggested actions:

1. Check that you have set the device to use a wireless connection.
2. Check that antennas are properly installed.
3. Check that you have selected the correct access point (your wireless router).
4. Make sure you have set wireless security settings to match what you have set up your router to use.
5. Check that the distance from the Media Center Extender to the router is within a reasonable range.

Problem: Poor video/display quality, incorrect/poor resolution. Suggested actions:

1. Ensure you are using the highest quality connection between your TV and the Media Center Extender (HDMI is best, then component, then SCART [where available] then S-Video, then composite).
2. If you are using HDMI or Component, make sure that you have set the device to output the highest resolution your TV will support (e.g. use 720p instead of 480i).
3. If you are using SCART, S-Video or composite, make sure you use 480i for NTSC screens and 576i for PAL screens.

Problem: Incorrect aspect ratio. Suggested actions:

Ensure you have properly set the aspect ratio in your settings.

Problem: Can't find the device from the computer. Suggested actions:

1. Check that networking (wired or wireless) has been setup on the device (see above).
2. If using a wireless connection, ensure that you have connected to the proper access point (e.g. yours and not your neighbor's).
3. If your home has multiple networks (multiple routers) ensure that your Media Center computer and the Extender are on the same network (router).

4. Try to ping the device from your Vista computer.

Problem: Can find the device, but it fails to associate/setup in Vista. Suggested actions:

1. Ensure that you have installed the patches that came on the installation CD and that you have rebooted your Vista computer after the patch installation.
2. You can only have the Extender associated to one computer at a time; ensure that it has been removed from any previous computers that are in the home.
3. Sometimes rebooting everything really is the best solution. Shut off the device. Restart the computer and wait for it to fully start; make sure Media Center has started as well. Then turn back on the device and try association again.

Problem: Can't see my files on the Vista Media Center or Media Center Extender:

Check that the files are in a watched folder. If they aren't, add the folder containing the files by selecting Tasks>settings>Library Setup>Add Folders.

Problem: Want to add a Linksys NAS (network storage) device

1. Make sure that the NAS is connected to the same router as the Media Center computer and Media Center Extender.
2. Go to Tasks>settings>Library Setup>Add Folders.
3. Select "add folder to watch".
4. Select "add shared folders from another computer" then select the NAS device you want to add.

Problem: Can't see the Linksys NAS.

1. Make sure you followed the steps to add a NAS.
2. Make sure that you can see the NAS on the Media Center computer.
3. Check that your router has UpNp enabled.

Problem: A burned DVD doesn't work

1. Only DVD-Video is supported.

2. DVD-R/RW is recommended at burning speed X2.
3. DVD+R/RW is recommended at burning speed X2, 4.
4. Multi-sessions are not supported.
5. DL is not supported.
6. DVD's that use MP3 are not supported.

Problem: A burned CDDA doesn't work

1. Only CD-DA is supported
2. We recommend that you use the lowest burning speed.
3. CD's bigger than 700MB are not supported.
4. Multi-sessions are not supported.
5. CD's that use MP3 are not supported.

Remote Control Troubleshooting

1. If any button is stuck over 30 seconds, the remote control will go into sleeping mode until the button is pressed.
2. If the remote control does not appear to be working, check the following:
   - that the batteries are working
   - that you are pointing the remote control directly at the receiver.
   - that the IR sensor on the receiver is not covered up, and no natural or artificial light is shining directly on it.
   - that the remote control is within 20 feet of the receiver.
   - that you have not minimized or exited Media Center. To reactivate Media Center, move the mouse and then click anywhere in the Media Center window
3. If the LED doesn't flash, or flashes continuously, remove the batteries from the remote control and reinstall.

Firewall Settings Troubleshooting

Find out which firewall is running on your Computer

If you're not sure whether Windows Firewall is running on your Computer, or whether your Computer came with another firewall installed and

running, here's how you can check to see which firewalls are installed on your computer:

1. Click the Start button, click Control Panel, and then click Security.
2. Click Security Center and Expand the Firewall section if it's not already expanded. This will tell you which firewall is protecting your Computer.
3. If you see that multiple firewalls are running on your Computer, click Show me the firewall programs on this computer to bring up the complete list of firewalls that are installed and running on your Computer.

Note: It is recommended that you only run one firewall at a time on your Computer.

Configuring Windows Firewall

Windows Firewall is automatically configured to enable your Media Center Extender to connect to your Windows Vista-based Computer using Windows Media Center during setup. However, if the settings are changed after setup has completed, connectivity between your Media Center Extender and your Windows Vista-based Computer will be disrupted.

To manually configure or verify the configuration of Windows Firewall

1. Click the Start button, click Control Panel, and then click Security.
2. Under Windows Firewall, click Allow a program through Windows Firewall. Because this task requires Administrator rights, you will see a User Account Control dialog box.
3. On the Exceptions tab, scroll down the list and locate the entry for Media Center Extenders. Select the check box next to this entry, if it is not already enabled, and click Apply.
4. Click the General tab, and make sure that the Block all incoming connections option is not selected.

Configuring Windows Live OneCare

Windows Live OneCare needs to be configured to enable your Windows Media Center Extender to connect to your Windows Vista-based Computer.

To manually configure or verify the configuration of Windows Live OneCare

1. Launch Windows Live OneCare.
2. Under Common Tasks, click Change OneCare settings.
3. Click the Firewall tab, and then click the Firewall connection tool button.
4. Locate the entry for Connect my Media Center Extender to my Media Center Computer. Select the check box next to this entry if it is not already enabled, and then click Apply.

Additionally, the firewall protection level can affect connectivity. If the protection level is set to Restricted, connectivity between the Windows Media Center Extender and Windows Media Center will be broken. The firewall protection level should be set to Automatic (recommended).

Configuring a non-Microsoft firewall

If you use a non-Microsoft firewall, you may need to manually configure your firewall to allow Media Center Extender applications access to the ports. A firewall vendor may ask you to configure the firewall in two different ways.

1. Some firewall vendors want you to configure the firewall for the actual application—in other words, to let the firewall know what application(s) can access the ports.
2. Some firewall vendors may want you to configure the port or ports the application is using.

During the firewall configuration process, you may also need to know what network the application or port needs to work with. In the configuration setting, a Local Subnet network means the application or port is for use on the local (or your "home") network. Internet means the application will talk to other computers on the Internet.

The following table shows the specific information you will need to configure some non-Microsoft firewalls for specific Windows Media Center Extender applications.

Application	Protocol/Port	Direction	Network
svchost.exe	UDP 1900	Inbound	Local Subnet
svchost.exe	TCP 3390	Inbound	Local Subnet
svchost.exe	TCP 2177	Inbound, Outbound	Local Subnet
svchost.exe	UDP 2177	Inbound, Outbound	Local Subnet
system	TCP 10244	Inbound, Outbound	Local Subnet
ehshell.exe	TCP 554	Inbound, Outbound	Local Subnet
ehshell.exe	UDP 5004, 5005	Inbound, Outbound	Local Subnet
ehshell.exe	TCP 8554-8558	Inbound, Outbound	Local Subnet
ehshell.exe	UDP 50004-50013	Inbound, Outbound	Local Subnet
ehshell.exe	UDP 7777-7781	Inbound, Outbound	Local Subnet
mcx2prov.exe	Random	Inbound, Outbound	Internet
mcrmgr.exe	Random	Inbound, Outbound	Internet

The procedure for manually configuring a firewall is different for each firewall model and for each firewall manufacturer. For more information about how to configure your firewall, see your firewall documentation.

Media Center FAQ's

I have a firewall installed on my Media Center Computer. Will I need to configure it to make Media Center Extender work?

Depending on which firewall you have installed on your Computer, you may have to configure it to enable Media Center Extender to work. You can read more about firewalls at Firewalls and Media Center Extender.

What are all the pieces that I need to make this work?

A home network—wireless or wired. If you choose wireless, we strongly recommend using a dual band 802.11N router configured properly. A Computer running Windows Vista Home Premium or Windows Vista Ultimate connected directly to your home network by an Ethernet cable to the router. A Windows Media Center Extender (like the DMA2100 or DMA2200) device connected wirelessly or wired to your home network.

I've heard the phrase Windows Media Center Extender. What is a Windows Media Center Extender?

A Windows Media Center Extender is a hardware device that, when connected to a TV, gives you the ability to enjoy the Windows Media Center experience and media on that TV, even though your Windows Vista-based Computer is in another room.

What kind of wireless home network will work best?

You can read more about building the optimal home wireless network in Wireless Home Networking Basics and Advanced Home Wireless Network Troubleshooting.

I already own a stand-alone Media Center Extender. Will it still work with Windows Vista?

No. Windows XP Media Center Extenders are not compatible with the Windows Vista operating system.

Advanced Home Wireless Network Troubleshooting for Windows Media Center Extenders

If you are looking for better performance in your home wireless network, here are some more advanced tips that may help to optimize your network even more.

Update the software in your wireless router or access point

The software that runs inside a router is typically called firmware. Router manufacturers may update the software that is originally placed in the device when it ships. This updated software is often available to you for download in the support area of the manufacturer's website. Many times, updated software for your wireless router can solve problems with performance or other strange behavior, such as unexplained disconnects from the wireless network. Make sure to periodically check for any updates for your wireless router.

Updating the software in a wireless router may not be a straightforward process for novices. When you locate firmware updates to download for your specific model of router, also check for any instructions that may be available on how to install the updates. Download the latest firmware update from the manufacturer's website to your computer and print any instructions you find. Once you have downloaded the firmware to your computer, visit the webpage administration utility so that your router updates it with the new firmware. Consult the manufacturer's website or your router instruction manual for more details on how to update the firmware.

Note: Even if you have recently purchased your router or access point, the firmware may still be out of date. Always double-check that you have the latest firmware, regardless of how long you have owned your wireless equipment.

Changing wireless networking channels

Within a wireless networking standard, individual channels exist that enable multiple wireless devices to use different portions of the available bandwidth. Many wireless routers are preconfigured to use a specific channel. If your neighbor has a wireless network, you might both be using the same channel. This can cause both of your wireless networks to slow down because they have to accommodate traffic that does not

belong to them. Changing your router to operate on a different channel may improve your performance.

To change your wireless networking channel, use the webpage administration utility for your router. Consult your router instruction manual for more details on changing channels and other advanced configuration options for your wireless network.

Network setup changes

One of the more difficult modifications to make to your home wireless network can also have the most significant impact on overall performance. For example, you may have a work Computer in your office, a family Computer in your living room that stores all of the media you want access to, and a Media Center Extender in your master bedroom. If your broadband Internet access enters your house in your office, you'll likely have both the family Computer and the Media Center Extender connected wirelessly to the work Computer, which is connected directly to the router (at the access point). But this type of configuration is not supported because it causes streamed video and other media to travel over the wireless network twice and can result in a seemingly unsolvable network performance problem. Consider more complex modifications to your home network, such as changing the point of entry for Internet into your house. If you have a phone jack near the Computer in the living room, perhaps the DSL or cable modem and router can move there, and the office Computer can connect wirelessly to the network. This configuration change allows the family Computer to connect to the router with wired Ethernet, placing significantly less stress on the network for streaming media playback.

Another option to consider is moving your wireless access point or router to a different room in the house to reduce the overall wireless distances or obstructions. Perhaps it is reasonably easy to run a longer Ethernet wire between your family Computer and the access point, but still locate it in another room.

Record TV shows at lower quality levels

If you cannot solve your network performance problems, one option to consider is setting Windows Media Center to record TV shows at a lower quality level. The lower recording levels for Windows Media Center use less storage, and it requires less network bandwidth to stream

those programs to your Media Center Extender. Experiment by trying successively lower quality levels when you record programs until you get more reliable recorded TV playback through your Media Center Extender.

Note: Recording shows at lower quality levels does not affect the playback of live TV on your Media Center Extender. Live TV is always sent from the Windows Media Center-based Computer to the Media Center Extender at the best quality level.

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WEB: If your questions are not addressed here, refer to the following websites:

Microsoft

- Advanced Home Wireless Network Troubleshooting: www.microsoft.com/windows/products/winfamily/mediacenter/troubleshooting.mspx
- Firewall Setup: www.microsoft.com/windows/products/winfamily/mediacenter/firewall.mspx
- Media Center Extender FAQ: www.microsoft.com/windows/products/winfamily/mediacenter/extenderfaq.mspx

Linksys: **www.linksys.com**

Appendix B: Specifications

Model DMA2100

Wireless Network

Wi-Fi Standards	Draft dual band 802.11N, 802.11G, 802.11B (2.4GHz and 5GHz)
Security features	WEP, WPA, WPA2
Security key bits	64, 128, 256
# of Antennas	2

Media Playback Formats

Audio from Vista PC:	PCM Audio
	MP3
	WMA
	WMA-Pro
	AC-3
	MPEG Audio
	AAC-LC Stereo via Vista Media Center extension
Video from Vista PC:	MPEG-1
	MPEG-2
	WMV9 (Standard and High Definition)
	VC-1 Advanced Profile 4.0
Pictures from Vista PC:	JPG, PNG, BMP, GIF

Ports

HDMI 1.2 Audio/Video
Component Video
Composite Video
S-Video
Digital SPDIF Coaxial RCA Audio
Analog Stereo RCA Audio

	Ethernet 10/100
	DC Power
	USB port for Service purpose only
	2 Antennas
Cables	Component cable 1.5m
	Composite Video cable 1.2m Stereo Audio cable 1.2m
	Ethernet cable 2m
	SCART adapter (Europe only)

General

Manual Language(s)	English, French Canadian
UI Language(s)	English, French Canadian
Buttons, Rear	Reset/Default setting button
LEDs	Front: On/Standby. Rear: Ethernet inlet Connected/Busy
Power Supply	Attached universal Wall Plug (100-240V to 12V/1.5A DC-plug) with exchangable Main Plug clips for each region
Dimensions	6.69" x 4.45" x 7.40" (170 x 113 x 188 mm) (Incl. Inlets, feet and Antennas mounted/ raised. Excl. Power supply)
Weight	700 g (1.54 lbs) 24.69 oz.
Power	12V Max. 1.5A (18W)
Certification	FCC, CE, IC

Environmental

Operating Temp.	32 to 104°F (0 to 40°C)
Storage Temp.	-4 to 158°F (–20 to 70°C)
Operating Humidity	10 to 85% Non-condensing
Storage Humidity	5 to 90% Non-condensing

Model DMA2200

Wireless Network

Wi-Fi Standards	Draft dual band 802.11N, 802.11G, 802.11B (2.4GHz and 5GHz)
Security features	WEP, WPA, WPA2
Security key bits	64, 128, 256
# of Antennas	3

Media Playback Formats

Audio from Disc:	CD-Audio / LPCM - WAV
Audio from Vista PC:	PCM Audio
	MP3
	WMA
	WMA-Pro
	AC-3
	MPEG Audio
	AAC-LC Stereo via Vista Media Center extension
Video from Disc:	Commercial DVD-Video (MPEG2/PCM/AC3/ DTS pass through with Macrovision, CSS and Region code)
Video from Vista PC:	MPEG-1
	MPEG-2
	WMV9 (Standard and High Definition)
	VC-1 Advanced Profile 4.0
Pictures from Vista PC:	JPG, PNG, BMP, GIF
DVD-Video Region	US and Canada=1, Europe=2, Singapore=3, Australia and New Zealand=4

Ports

HDMI 1.2 Audio/Video
Component Video
Composite Video
S-Video
Digital SPDIF Coaxial RCA Audio
Digital SPDIF Optical Toslink Audio

	Analog Stereo RCA Audio
	Ethernet 10/100
	Main Power
	USB port for Service purpose only
	3 Antennas

Cables

	Component cable 1.5m
	Composite Video cable 1.2m
	Stereo Audio cable 1.2m
	Ethernet cable 2m
	SCART cable 1.2m
	Power cable, localized to country of sale

General

Manual Language(s)	English, French Canadian
UI Language(s)	English, French Canadian
Disc Loader	Front drawer type, for DVD-Video and CD-Audio disc/formats only
Buttons, Front	Eject, Play/Pause, Stop, Standby
Buttons, Rear	Main Switch, Reset/Default setting
Display	Front display
LEDs	Ethernet connected/busy LED's in rear panel inlet, Standby
Power Supply	Universial (100-240V, 18W) built-in,S with low standby consumption <1W
Dimensions	9.09" x 4.92" x 12.95" (231 x 125 x 329 mm) (Incl. Inlets, buttons, feet and Antennas mounted/raised. Excl. Connectors)
Weight	4.85 lbs, 77.60 oz (2.2 kg)
Certification	FCC, CE, IC

Environmental

Operating Temp.	32 to 104°F (0 to 40°C)
Storage Temp.	-4 to 158°F (–20 to 70°C)
Operating Humidity	10 to 85% Non-condensing
Storage Humidity	5 to 90% Non-condensing

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- One (1) year for new product
- Ninety (90) days for refurbished product

This limited warranty is non-transferable and extends only to the original end-user purchaser. Your exclusive remedy and Linksys' entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

EXCLUSIONS AND LIMITATIONS

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non-Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

ALL SOFTWARE PROVIDED BY LINKSYS WITH THE PRODUCT, WHETHER FACTORY LOADED ON THE PRODUCT OR CONTAINED ON MEDIA ACCOMPANYING THE PRODUCT, IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Linksys does not warrant

that the operation of the product or software will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the product, software or any equipment, system or network on which the product or software is used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party's service for which this product's use or operation may require.

TO THE EXTENT NOT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT (INCLUDING ANY SOFTWARE), EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL LINKSYS' LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

OBTAINING WARRANTY SERVICE

If you have a question about your product or experience a problem with it, please go to www.linksys.com/support where you will find a variety of online support tools and information to assist you with your product. If

the product proves defective during the Warranty Period, contact Linksys Technical Support for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found in the product User Guide and at www.linksys.com. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Linksys at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be rejected. Do not include any other items with the product you are returning to Linksys. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys' then-current rates.

Information about Linksys' current technical support offerings and policies (including any fees for support services) can be found at www.linksys.com/support.

This limited warranty is governed by the laws of the jurisdiction in which the Product was purchased by you.

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623.

Appendix E: Regulatory Information

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. IEEE 802.11b or 802.11g operation of this product in the USA is firmware-limited to channels 1 through 11.

Safety Notices

- Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.
- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

WARNING: This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Industry Canada Statement

This device complies with Industry Canada ICES-003 and RSS210 rules.

Operation is subject to the following two conditions:

1. This device may not cause interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device. This device has been designed to operate with an antenna having a maximum gain of 2dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

   To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

Industry Canada Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and

operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Avis d'Industrie Canada

Cet appareil est conforme aux normes NMB003 et RSS210 d'Industrie Canada.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

1. il ne doit pas produire de brouillage et
2. il doit accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif. Le dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximum de 2 dBi. Les règlements d'Industrie Canada interdisent strictement l'utilisation d'antennes dont le gain est supérieur à cette limite. L'impédance requise de l'antenne est de 50 ohms.
   Afin de réduire le risque d'interférence aux autres utilisateurs, le type d'antenne et son gain doivent être choisis de façon à ce que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne soit pas supérieure au niveau requis pour obtenir une communication satisfaisante.

Avis d'Industrie Canada concernant l'exposition aux radio-fréquences :

Ce matériel est conforme aux limites établies par IC en matière d'exposition aux radiofréquences dans un environnement non contrôlé. Ce matériel doit être installé et utilisé à une distance d'au moins 20 cm entre l'antenne et le corps de l'utilisateur.

L'émetteur ne doit pas être placé près d'une autre antenne ou d'un autre émetteur, ou fonctionner avec une autre antenne ou un autre émetteur.

Wireless Disclaimer

The maximum performance for wireless is derived from IEEE Standard 802.11 specifications. Actual performance can vary, including lower

wireless network capacity, data throughput rate, range and coverage. Performance depends on many factors, conditions and variables, including distance from the access point, volume of network traffic, building materials and construction, operating system used, mix of wireless products used, interference and other adverse conditions.

Avis de non-responsabilité concernant les appareils sans fil

Les performances maximales pour les réseaux sans fil sont tirées des spécifications de la norme IEEE 802.11. Les performances réelles peuvent varier, notamment en fonction de la capacité du réseau sans fil, du débit de la transmission de données, de la portée et de la couverture. Les performances dépendent de facteurs, conditions et variables multiples, en particulier de la distance par rapport au point d'accès, du volume du trafic réseau, des matériaux utilisés dans le bâtiment et du type de construction, du système d'exploitation et de la combinaison de produits sans fil utilisés, des interférences et de toute autre condition défavorable.

Declaration of Conformity with Regard to the EU Directive 1999/5/EC and 2004/108/EC(R&TTE and EMC Directive)

Български [Bulgarian]	Това оборудване отговаря на съществените изисквания и приложими клаузи на Директива 1999/5/ЕС.
Česky [Czech]:	Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 1999/5/EC.
Dansk [Danish]:	Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.
Deutsch [German]:	Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian]:	See seade vastab direktiivi 1999/5/EÜ olulistele nõuetele ja teistele asjakohastele sätetele.
English:	This equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]:	Este equipo cumple con los requisitos esenciales asi como con otras disposiciones de la Directiva 1999/5/CE.
Ελληνική [Greek]:	Αυτός ο εξοπλισμός είναι σε συμμόρφωση με τις ουσιώδεις απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 1999/5/EC.
Français [French]:	Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC.
Íslenska [Icelandic]:	Þetta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.
Italiano [Italian]:	Questo apparato é conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.
Latviski [Latvian]:	Šī iekārta atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]:	Šis įrenginys tenkina 1999/5/EB Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas.
Nederlands [Dutch]:	Dit apparaat voldoet aan de essentiele eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.
Malti [Maltese]:	Dan l-apparat huwa konformi mal-ħtiġiet essenzjali u l-provedimenti l-oħra rilevanti tad-Direttiva 1999/5/EC.
Magyar [Hungarian]:	Ez a készülék teljesíti az alapvető követelményeket és más 1999/5/EK irányelvben meghatározott vonatkozó rendelkezéseket.
Norsk [Norwegian]:	Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.
Polski [Polish]:	Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 1999/5/EC.
Português [Portuguese]:	Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.
Română [Romanian]	Acest echipament este in conformitate cu cerintele esentiale si cu alte prevederi relevante ale Directivei 1999/5/EC.
Slovensko [Slovenian]:	Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 1999/5/EC.

Slovensky [Slovak]:	Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 1999/5/EC.
Suomi [Finnish]:	Tämä laite täyttää direktiivin 1999/5/EY olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.
Svenska [Swedish]:	Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 1999/5/EC.

NOTE: For all products, the Declaration of Conformity (DofC) is available through one or more of these options:

- A pdf file is included on the product's CD.
- A print copy is included with the product.
- A pdf file is available on the product's webpage. Visit **www.linksys.com/international** and select your country or region. Then select your product.

Wireless Equipment (Wireless-N/G/A/B Products)

The following standards were applied during the assessment of the product against the requirements of the Directive 1999/5/EC and 2004/108/EC:

- Radio: EN 300 328 and/or EN 301 893 as applicable
- EMC: EN 301 489-1, EN 301 489-17, EN55013, EN55020, EN55022, EN55024
- Safety: EN 60950-1 or EN60065 and either EN 50385 or EN 50371

Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC) are required for operation in the 5 GHz band.

DFS: The equipment meets the DFS requirements as defined in ETSI EN 301 893. This feature is required by the regulations to avoid interference with Radio Location Services (radars).

TPC: For operation in the 5 GHz band, the maximum power level is 3 dB or more below the applicable limit. As such, TPC is not required.

CE Marking

For the Linksys Wireless-N, -G, -B, and/or -A products, the following CE mark, notified body number (where applicable), and class 2 identifier are added to the equipment.

Check the CE label on the product to find out which notified body was involved during the assessment.

National Restrictions

This product may be used in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below:

Ce produit peut être utilisé dans tous les pays de l'UE (et dans tous les pays ayant transposés la directive 1999/5/CE) sans aucune limitation, excepté pour les pays mentionnés ci-dessous:

Questo prodotto è utilizzabile in tutte i paesi EU (ed in tutti gli altri paesi che seguono le direttive EU 1999/5/EC) senza nessuna limitazione, eccetto per i paesii menzionati di seguito:

Das Produkt kann in allen EU Staaten ohne Einschränkungen eingesetzt werden (sowie in anderen Staaten die der EU Direktive 1999/5/CE folgen) mit Außnahme der folgenden aufgeführten Staaten:

In the majority of the EU and other European countries, the 2,4- and 5-GHz bands have been made available for the use of wireless local area networks (LANs). Table 1 provides an overview of the regulatory requirements applicable for the 2,4- and 5-GHz bands.

Later in this document you will find an overview of countries in which additional restrictions or requirements or both are applicable.

The requirements for any country may evolve. Linksys recommends that you check with the local authorities for the latest status of their national regulations for both the 2,4- and 5-GHz wireless LANs.

Overview of Regulatory Requirements for Wireless LANs

Frequency Band (MHz)	Max Power Level (EIRP) (mW)	Indoor ONLY	Indoor & Outdoor
2400-2483,5	100		X
5150-5350†	200	X	
5470-5725†	1000		X

†Dynamic Frequency Selection and Transmit Power Control are required in the frequency ranges of 5250-5350 MHz and 5470-5725 MHz.

The following countries have restrictions and/or requirements in addition to those given in the *Overview of Regulatory Requirements for Wireless LANs* Table:

Denmark

In Denmark, the band 5150 - 5350 MHz is also allowed for outdoor usage.

I Danmark må frekvensbåndet 5150 - 5350 også anvendes udendørs.

France

For 2,4 GHz, the product should not be used outdoors in the band 2454 - 2483,5 MHz. There are no restrictions when used in other parts of the 2,4 GHz band OR when used indoors. Check http://www.arcep.fr/ for more details.

Pour la bande 2,4 GHz, l' équipement ne doit pas être utilisé en extérieur dans la bande 2454 - 2483,5 MHz. Il n'y a aucune restriction pour son utilisation dans d'autres parties de la bande des 2,4 GHz ainsi que pour une utilisation en intérieur. Consultez http://www.arcep.fr/ pour de plus amples détails.

Applicable Power Levels in France (2,4 GHz only)

Location	Frequency Range (MHz)	Power (EIRP)
Indoor (No restrictions)	2400-2483,5	100 mW (20 dBm)
Outdoor	2400-2454 2454-2483,5	100 mW (20 dBm) 10 mW (10 dBm)

Italy

This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this 2,4-GHz wireless LAN product is operating within the boundaries of the owner's property, its use requires a "general authorization". Please check http://www.comunicazioni.it/it/ for more details.

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN a 2,4 GHz richiede una "Autorizzazione Generale". Consultare http://www.comunicazioni.it/it/ per maggiori dettagli.

Latvia

The outdoor usage of the 2,4 GHz band requires an authorization from the Electronic Communications Office. Please check http://www.esd.lv for more details.

2,4 GHz frekveču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: http://www.esd.lv.

Notes:

1. Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 1999/5/EC has also been implemented in those countries.
2. The regulatory limits for maximum output power are specified in EIRP. The EIRP level of a device can be calculated by adding the gain of the antenna used (specified in dBi) to the output power available at the connector (specified in dBm).

Product Usage Restrictions

This product is designed for indoor usage only. Outdoor usage is not recommended, unless otherwise noted.

2,4 GHz Restrictions

This product is designed for use with the standard, integral or dedicated (external) antenna(s) that is/are shipped together with the equipment. However, some applications may require the antenna(s), if removable, to be separated from the product and installed remotely from the device by using extension cables. For these applications, Linksys offers an R-SMA extension cable (AC9SMA) and an R-TNC extension cable (AC9TNC). Both of these cables are 9 meters long and have a cable loss (attenuation) of 5 dB. To compensate for the attenuation, Linksys also offers higher gain antennas (only for 2,4 GHz), the HGA7S (with R-SMA connector) and HGA7T (with R-TNC connector). These antennas have a gain of 7 dBi and may only be used with either the R-SMA or R-TNC extension cable. Combinations of extension cables and antennas resulting in a radiated power level exceeding 100 mW EIRP are illegal.

Third-Party Software or Firmware

The use of software or firmware not supported/provided by Linksys may result that the equipment is no longer compliant with the regulatory requirements.

Technical Documents on www.linksys.com/international

Follow these steps to access technical documents:

1. Enter **http://www.linksys.com/international** in your web browser.
2. Select the country or region in which you live.
3. Click the **Products** tab.
4. Select the appropriate product category.
5. Select the product sub-category, if necessary.
6. Select the product.
7. Select the type of documentation you want from the "More Information" section. The document will open in PDF format if you have Adobe Acrobat installed on your computer.

NOTE: If you have questions regarding the compliance of this product or you cannot find the information you need, please contact your local sales office or visit **www.linksys.com/international**

User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:

English - Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Български (Bulgarian) - Информация относно опазването на околната среда за потребители в Европейския съюз

Европейска директива 2002/96/ЕС изисква уредите, носещи този символ върху изделието и/или опаковката му, да не се изхвърля т с несортирани битови отпадъци. Символът обозначава, че изделието трябва да се изхвърля отделно от сметосъбирането на обикновените битови отпадъци. Ваша е отговорността този и другите електрически и електронни уреди да се изхвърлят в предварително определени от държавните или общински органи специализирани пунктове за събиране. Правилното изхвърляне и рециклиране ще спомогнат да се предотвратят евентуални вредни за околната среда и здравето на населението последствия. За по-подробна

информация относно изхвърлянето на вашите стари уреди се обърнете към местните власти, службите за сметосъбиране или магазина, от който сте закупили уреда.

Ceština (Czech) - Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

Dansk (Danish) - Miljøinformation for kunder i EU

EU-direktiv 2002/96/EF kræver, at udstyr der bærer dette symbol på produktet og/eller emballagen ikke må bortskaffes som usorteret kommunalt affald. Symbolet betyder, at dette produkt skal bortskaffes adskilt fra det almindelige husholdningsaffald. Det er dit ansvar at bortskaffe dette og andet elektrisk og elektronisk udstyr via bestemte indsamlingssteder udpeget af staten eller de lokale myndigheder. Korrekt bortskaffelse og genvinding vil hjælpe med til at undgå mulige skader for miljøet og menneskers sundhed. Kontakt venligst de lokale myndigheder, renovationstjenesten eller den butik, hvor du har købt produktet, angående mere detaljeret information om bortskaffelse af dit gamle udstyr.

Deutsch (German) - Umweltinformation für Kunden innerhalb der Europäischen Union

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist , nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte

benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

Eesti (Estonian) - Keskkonnaalane informatsioon Euroopa Liidus asuvatele klientidele

Euroopa Liidu direktiivi 2002/96/EÜ nõuete kohaselt on seadmeid, millel on tootel või pakendil käesolev sümbol, keelatud kõrvaldada koos sorteerimata olmejäätmetega. See sümbol näitab, et toode tuleks kõrvaldada eraldi tavalistest olmejäätmevoogudest. Olete kohustatud kõrvaldama käesoleva ja ka muud elektri- ja elektroonikaseadmed riigi või kohalike ametiasutuste poolt ette nähtud kogumispunktide kaudu. Seadmete korrektne kõrvaldamine ja ringlussevõtt aitab vältida võimalikke negatiivseid tagajärgi keskkonnale ning inimeste tervisele. Vanade seadmete kõrvaldamise kohta täpsema informatsiooni saamiseks võtke palun ühendust kohalike ametiasutustega, jäätmekäitlusfirmaga või kauplusega, kust te toote ostsite.

Español (Spanish) - Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

ξλληνικά (Greek) - Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης

Η Κοινοτική Οδηγία 2002/96/EC απαιτεί ότι ο εξοπλισμός ο οποίος φέρει αυτό το σύμβολο στο προϊόν και/ή στη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μικτά κοινοτικά απορρίμματα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορρίμματα. Είστε υπεύθυνος για την απόρριψη του παρόντος και άλλου ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων

εγκαταστάσεων συγκέντρωσης απορριμμάτων οι οποίες παρέχονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη πιθανών αρνητικών συνεπειών για το περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλιού σας εξοπλισμού, παρακαλώ επικοινωνήστε με τις τοπικές αρχές, τις υπηρεσίες απόρριψης ή το κατάστημα από το οποίο αγοράσατε το προϊόν.

Français (French) - Informations environnementales pour les clients de l'Union européenne

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

Italiano (Italian) - Informazioni relative all'ambiente per i clienti residenti nell'Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

Latviešu valoda (Latvian) - Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā

Direktīvā 2002/96/EK ir prasība, ka aprīkojumu, kam pievienota zīme uz paša izstrādājuma vai uz tā iesaiņojuma, nedrīkst izmest nešķirotā veidā kopā ar komunālajiem atkritumiem (tiem, ko rada vietēji iedzīvotāji un uzņēmumi). Šī zīme nozīmē to, ka šī ierīce ir jāizmet atkritumos tā, lai tā nenonāktu kopā ar parastiem mājsaimniecības atkritumiem. Jūsu pienākums ir šo un citas elektriskas un elektroniskas ierīces izmest atkritumos, izmantojot īpašus atkritumu savākšanas veidus un līdzekļus, ko nodrošina valsts un pašvaldību iestādes. Ja izmešana atkritumos un pārstrāde tiek veikta pareizi, tad mazinās iespējamais kaitējums dabai un cilvēku veselībai. Sīkākas ziņas par novecojuša aprīkojuma izmešanu atkritumos jūs varat saņemt vietējā pašvaldībā, atkritumu savākšanas dienestā, kā arī veikalā, kur iegādājāties šo izstrādājumu.

Lietuvškai (Lithuanian) - Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

Europos direktyva 2002/96/EC numato, kad įrangos, kuri ir kurios pakuotė yra pažymėta šiuo simboliu (įveskite simbolį), negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminį reikia šalinti atskirai nuo bendro buitinių atliekų srauto. Jūs privalote užtikrinti, kad ši ir kita elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimo sistemas. Tinkamai šalinant ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie jūsų senos įrangos šalinimą gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos arba parduotuvės, kuriose įsigijote tą gaminį.

Malti (Maltese) - Informazzjoni Ambjentali għal Klijenti fl-Unjoni Ewropea

Id-Direttiva Ewropea 2002/96/KE titlob li t-tagħmir li jkun fih is-simbolu fuq il-prodott u/jew fuq l-ippakkjar ma jistax jintrema ma' skart muniċipali li ma ġiex isseparat. Is-simbolu jindika li dan il-prodott għandu jintrema separatament minn ma' l-iskart domestiku regolari. Hija responsabbiltà tiegħek li tarmi dan it-tagħmir u kull tagħmir ieħor ta' l-elettriku u elettroniku permezz ta' faċilitajiet ta' ġbir appuntati apposta mill-gvern jew mill-awtoritajiet lokali. Ir-rimi b'mod korrett u r-riċiklaġġ jgħin jipprevjeni konsegwenzi negattivi potenzjali għall-ambjent u għas-saħħa tal-bniedem. Għal aktar informazzjoni dettaljata dwar ir-rimi tat-tagħmir antik tiegħek, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali tiegħek, is-servizzi għar-rimi ta' l-iskart, jew il-ħanut minn fejn xtrajt il-prodott.

Magyar (Hungarian) - Környezetvédelmi információ az európai uniós vásárlók számára

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csomagolásán az alábbi címke megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékelszállítási rendszerektõl elkülönített eljárást kell alkalmazni. Az Ön felelõssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által kijelölt gyűjtõredszereken keresztül számolja fel. A megfelelõ hulladékfeldolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelõzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékfeldolgozási szolgálattal, vagy azzal üzlettel, ahol a terméket vásárolta.

Nederlands (Dutch) - Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

Norsk (Norwegian) - Miljøinformasjon for kunder i EU

EU-direktiv 2002/96/EF krever at utstyr med følgende symbol avbildet på produktet og/eller pakningen, ikke må kastes sammen med usortert avfall. Symbolet indikerer at dette produktet skal håndteres atskilt fra ordinær avfallsinnsamling for husholdningsavfall. Det er ditt ansvar å kvitte deg med dette produktet og annet elektrisk og elektronisk avfall via egne innsamlingsordninger slik myndighetene eller kommunene bestemmer. Korrekt avfallshåndtering og gjenvinning vil være med på å forhindre mulige negative konsekvenser for miljø og helse. For nærmere informasjon om håndtering av det kasserte utstyret ditt, kan du ta kontakt med kommunen, en innsamlingsstasjon for avfall eller butikken der du kjøpte produktet.

Polski (Polish) - Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób i jego recykling pomogą zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

Português (Portuguese) - Informação ambiental para clientes da União Europeia

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo no produto e/ou na sua embalagem não seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eléctrico e electrónico através das instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem correctas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

Română (Romanian) - Informaţii de mediu pentru clienţii din Uniunea Europeană

Directiva europeană 2002/96/CE impune ca echipamentele care prezintă acest simbol pe produs şi/sau pe ambalajul acestuia să nu fie casate împreună cu gunoiul menajer municipal. Simbolul indică faptul că acest produs trebuie să fie casat separat de gunoiul menajer obişnuit. Este responsabilitatea dvs. să casaţi acest produs şi alte echipamente electrice şi electronice prin intermediul unităţilor de colectare special desemnate de guvern sau de autorităţile locale. Casarea şi reciclarea corecte vor ajuta la prevenirea potenţialelor consecinţe negative asupra sănătăţii mediului şi a oamenilor. Pentru mai multe informaţii detaliate cu privire la casarea acestui echipament vechi, contactaţi autorităţile locale, serviciul de salubrizare sau magazinul de la care aţi achiziţionat produsul.

Slovenčina (Slovak) - Informácie o ochrane životného prostredia pre zákazníkov v Európskej únii

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácností. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zberných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recyklácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaoberajúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

Slovenčina (Slovene) - Okoljske informacije za stranke v Evropski uniji

Evropska direktiva 2002/96/EC prepoveduje odlaganje opreme, označene s tem simbolom – na izdelku in/ali na embalaži – med običajne, nerazvrščene odpadke. Ta simbol opozarja, da je treba izdelek odvreči ločeno od preostalih gospodinjskih odpadkov. Vaša odgovornost je, da to in preostalo električno in elektronsko opremo odnesete na posebna zbirališča, ki jih določijo državne ustanove ali lokalna uprava. S pravilnim odlaganjem in recikliranjem boste preprečili morebitne škodljive vplive na okolje in zdravje ljudi. Če želite izvedeti več o odlaganju stare opreme, se obrnite na lokalno upravo, odpad ali trgovino, kjer ste izdelek kupili.

Suomi (Finnish) - Ympäristöä koskevia tietoja EU-alueen asiakkaille

EU-direktiivi 2002/96/EY edellyttää, että jos laitteistossa on tämä symboli itse tuotteessa ja/tai sen pakkauksessa, laitteistoa ei saa hävittää lajittelemattoman yhdyskuntajätteen mukana. Symboli merkitsee sitä, että tämä tuote on hävitettävä erillään tavallisesta kotitalousjätteestä. Sinun vastuullasi on hävittää tämä elektroniikkatuote ja muut vastaavat elektroniikkatuotteet viemällä tuote tai tuotteet viranomaisten määräämään keräyspisteeseen. Laitteiston oikea hävittäminen estää mahdolliset kielteiset vaikutukset ympäristöön ja ihmisten terveyteen. Lisätietoja vanhan laitteiston oikeasta hävitystavasta saa paikallisilta viranomaisilta, jätteenhävityspalvelusta tai siitä myymälästä, josta ostit tuotteen.

Svenska (Swedish) - Miljöinformation för kunder i Europeiska unionen

Det europeiska direktivet 2002/96/EC kräver att utrustning med denna symbol på produkten och/eller förpackningen inte får kastas med osorterat kommunalt avfall. Symbolen visar att denna produkt bör kastas efter att den avskiljts från vanligt hushållsavfall. Det faller på ditt ansvar att kasta denna och annan elektrisk och elektronisk utrustning på fastställda insamlingsplatser utsedda av regeringen eller lokala myndigheter. Korrekt kassering och återvinning skyddar mot eventuella negativa konsekvenser för miljön och personhälsa. För mer detaljerad information om kassering av din gamla utrustning kontaktar du dina lokala myndigheter, avfallshanteringen eller butiken där du köpte produkten.

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